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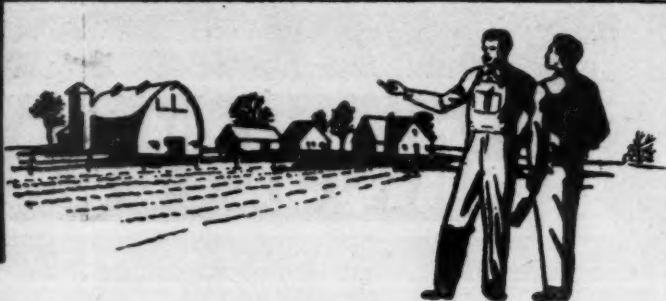
NUMBER 4



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Featuring— Planning and Re-Planning
Farming Programs

The Agricultural Education Magazine



A monthly magazine for teachers of agriculture. Managed by an editorial board chosen by the Agricultural Section of the American Vocational Association and published at cost by Interstate Printers and Publishers, Danville, Illinois.

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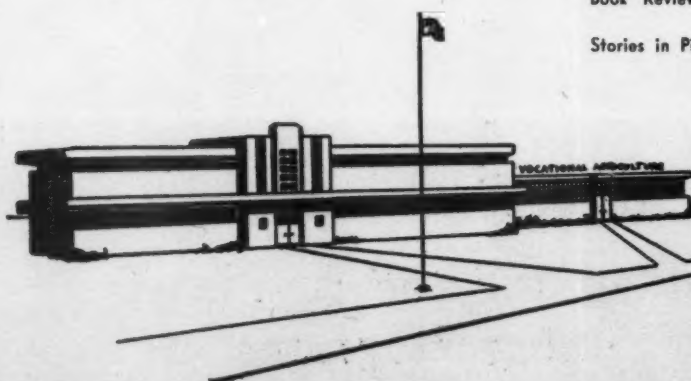
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Contents

Editorials

Developing Farming Programs for Changing Conditions...	75
George P. Deyoe.....	
From the Editor's Desk.....	75
Why Have Farming Programs?.....	76
W. A. Smith.....	
The Cover Picture.....	77
Developing Farming Programs of Vocational Agriculture Students.....	78
C. E. Bundy.....	
Planning and Re-Planning Farming Programs.....	81
Robert J. Steiner.....	
Planned Parent Education on Home Farming Programs.....	82
H. Palmer Hopkins.....	
Influence of High School Vocational Agriculture on the Rate of Establishment of Graduates in Farming.....	83
Duane L. Blake.....	
Many Factors Are Involved in Farming Program Development...	85
E. A. Hutchinson.....	
Using Banks to Finance Vocational Agriculture.....	86
Wilbur Weir.....	
The Place of Contests in the Vocational Agriculture Program...	86
David M. Rice.....	
Planning Farming Programs with Agr. I Boys.....	87
J. C. Atherton.....	
There Is Satisfaction in Teaching.....	90
Laurence Kelson.....	
Prepare Your Own Teaching Aids.....	91
Harlan E. Ridenour.....	
Professional and Teaching Aids.....	93
News and Views of the Profession.....	94
Book Reviews.....	95
Stories in Pictures.....	96



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Editorials

Developing Farming Programs For Changing Conditions

GEORGE P. DEYOE, Teacher Education,
University of Illinois.

Farming programs in vocational agriculture are effective to the degree that they contribute to the development of abilities needed for improved farming and farm living and for other responsibilities which farm people should assume. As never before, farming is undergoing profound changes which should be reflected in the farming programs and the related instruction for high-school students of vocational agriculture and for young farmers and adult farmers.

The increased mechanization of farming and improved methods of producing crops and livestock constitute a technological revolution of such proportions that it has been termed a "scientific explosion." To help present and prospective farmers keep pace with these developments calls for much alertness and ingenuity on the part of teachers and others in vocational agriculture. This includes an emphasis on the development of abilities to apply new scientific findings which will improve the efficiency of livestock and crop enterprises and the over-all returns from farming. Some activities which we promote are still handicapped by lags and inconsistencies which do not "make sense" when viewed in the light of modern scientific findings. For example, much of what we are still doing in grain shows, fairs, and judging contests contributes but little to the development of abilities necessary for success in farming, and some of these activities as they are conducted actually thwart progress. It has been demonstrated time and again that outward appearances of seeds and breeding animals have little or no relationship to characteristics which contribute to high levels of production and quality of products. For instance, new methods of selecting hogs for breeding stock on the basis of back-fat probes, rate of gain, feed conversion, yield of primal cuts, and proportion of lean meat call for new kind of instruction and new emphases in the swine enterprise in farming programs of youth and adults.

Capital requirements for farming and "out-of-pocket" expenditures for feed, fuel, fertilizer, seed, and some other essentials of production are increasing greatly. These call for increased attention to financial planning and money management in relation to farming programs. For example, the average investment per farm worker in the United States exceeds \$15,000 and is greater than the average investment per indus-

FROM THE EDITOR'S DESK

The Influence of Farming Programs --

What is there about vocational agriculture that causes people to ask, "Why is the vocational agriculture program different?" "What is it about vocational agriculture that is so good for boys?" "What gives the vocational agriculture program its special characteristics?" It is my belief that the answer to these questions lies in the farming program requirement.

The farming program requirement exerts a strong influence on every phase of the vocational agriculture program. The following examples of this influence illustrate the point:

Farming programs provide an opportunity for the application of classroom learnings to the broad range of farming activities on a "doing" level.

Farming programs provide the basis for building much of the instructional program for both high school students and out-of-school groups.

Farming programs provide the basis for many of the activities of the FFA.

Farming programs provide a means for developing a sense of responsibility for work to be done and for the well being of living, growing things.

Farming programs do much to help boys mature in a society which seems constantly to be trying to slow the maturation process.

Farming programs provide a means for helping young people acquire capital resources for future needs.

Farming programs provide a means for demonstrating to old and young alike; to friend, parent, and stranger; to teacher and employer that the young boy is growing up into a capable, responsible individual.

Farming programs provide the basis for the continuing individual on-farm instruction which contributes so much to the personal growth and development of the student as well as to the solution of production problems.

Farming programs help make it possible for a boy to have something which belongs only to him, thus providing excellent motivation for learning.

Farming programs provide a means for demonstrating good farm practices and the many new developments in farming.



This Vo-Ag student, his dad and the teacher in the Genoa, N. Y., community are checking the decision made by the boy as to whether the hay is ready for baling. This is typical of the problems which make up the boy's Farming Program as planned with the teacher and approved by the parent. The boy will be a junior in the Genoa school in September and already is sharing responsibility with his dad for making the decisions involved in most of the important enterprises on the farm. There is no shortage of real problems in his case for classroom work. Compare this case with that of the boy from the same community shown in the picture on the right.



This boy takes real pride in his heifer as he discusses with his teacher whether to use grain supplement with summer pasture for better growth and condition of the heifer. Conditioning for the County calf show is a factor in making the decision. The boy will be a sophomore when school opens. Being a town boy, he is developing his Farming Program on the farm of a co-operating farmer. The calf project is the first step. Arranging with the farmer to share responsibility for solving the problems in the various farm enterprises with this boy remains to be worked out. Until this is done the problems having reality for him are likely to be limited to those with his calf. (Photos by the author)

Why Have Farming Programs?

Present-day answers are needed for a long-time problem.

W. A. SMITH, Teacher Education, Cornell University.



W. A. Smith

AFTER forty years of vocational agriculture in the secondary school it may seem a little odd to raise the question of *why* about a feature of the program which is as permanent as the traditional farming program of the pupil. Originally it commonly was referred to as his project program and subsequently as the supervised farming program. Now we are beginning to use the phrase *Pupil's Individual Farming Program* to designate the means of carrying out the mandate in the Smith-Hughes Act that the pupil must engage in directed or supervised practice in agriculture on a farm for at least six months per year.

At the outset I want to make clear that I subscribe to the necessity of "farming programs" if learning is to take place which is vocational in nature. They are a *must* in our teaching. In other words, learning through doing is more than a catch-phrase if vocational competence is our objective, as it must be in vocational education.

Why Raise the Question?

It is a fairly natural human tendency for us to become habitual in our attitudes and activities without questioning why we believe and perform as we do. This may apply to our acceptance (or rejection) of the concept of individual farming programs. But such tendency does not lead to progress. Therefore, it is appropriate now and then to take stock of where we are and in what directions we should be headed. Why, then, do we have farming programs for boys in vocational agriculture and what should be the nature of them?

Source of Problems

In the first place, the pupil's farming program provides for *him* the source of the problems in farming for which he can gain competence both in ability to reach solutions and to perform. Problems which arise out of farming programs have reality to him and provide opportunity for the experiencing so essential to his learning. When his program is selected and planned on the basis of the farming in the area and on his farm, there is a certainty that the learning which results is in keeping with the foreseeable needs of the boy in preparing for farming. It follows then that the farm-

ing program must be as comprehensive and as complete in furnishing the problems of farming which he needs in his training as his ability and opportunity will permit and provide.

Too often we have limited our concept of the farming program to the experiences available through one or a few projects and to a very limited number and scope of problems. Consequently the boy has only a few problems which are real to him and through which he can gain the necessary experiences to make the learning vocational or, in other words, to enable him to perform. It is the boy who is being cheated in such cases.

Means of Learning

Farming programs are an essential *means* of learning. Therefore, they are an essential means of teaching if instruction is to be vocational. In this connection, we need to recognize that agriculture as a subject is no more vocational than any other subject in the school program. Many people seem to be in error in this regard. It is rather common for school administrators, guidance personnel and other faculty members in a school system to assume that the subject matter of agriculture is automatically vocational. They fail to understand what is required to make instruction vocational. If we who engage in vocational education fail to demonstrate the difference between vocational education and education for other purposes, we have little reason to criticize them.

(Continued on page 77)

Why Have - - -

(Continued from page 76)

The pupil's farming program is the chief means by which instruction is made vocational. It is the means by which learning is carried to the *doing* level and the ability to perform is brought about. Possession of knowledge is not enough in vocational education. The *use of knowledge* is an end which must be sought, hence the oft-quoted expression: *learning through doing*. The emphasis is in *learning to do*.

It seems to follow then that the boy with a single project or a limited program of experiencing is going to have only a limited opportunity to develop the abilities to perform in his vocation. Here again, he is being cheated.

Other Reasons

There is a variety of other reasons for farming programs. One of these was implied earlier in reference to farming programs as a source of problems, namely that of motivation. The boy with a real problem is the best student. He is the pupil most ready to learn and who makes relatively more progress in learning. Problems real to the boy are found in his farming program.

Another reason for farming programs, long referred to, is the opportunity provided for acquiring assets in farming. This is more important today than formerly. Ownership and acquiring capital bear a close relationship to interest and motivation of the boy as well as providing a beginning toward getting established in farming.

Other reasons for farming programs can be identified readily and have been over the years. However, as educators the two major reasons for us, since we are charged primarily with bringing about *vocational* learning, are those named earlier—as a source of problems and as a means of teaching (learning on the part of the boy).

Improving Farming Programs

As we continue to ask ourselves—Why have farming programs?, we will be continuously faced with the question, How can they be improved? Over the years we have made progress. However, today there seems to be some tendency in certain quarters to let down a bit upon the emphasis given to this essential part of vocational agriculture. It seems appropriate to suggest in this connection that without farming programs our instruc-

tion in agriculture will cease to be vocational.

In the beginning we started with individual projects, largely productive and ownership in nature. Then we added group projects, improvement projects, directed and supplementary practices, and so-called farm placement. It is apparent that over the years we have been attempting to broaden our concept of farming programs and to make them more effective as a device for making our instruction vocational.

It would be very short-sighted for us to consider that further improvement is no longer needed or possible. Personally, I am convinced that we are demonstrating conclusively that the whole-farm approach to farming programs has much merit over the project approach. Individual projects of the ownership type will remain a part of individual farming programs for a majority of our pupils, but we need to supplement and even place major emphasis upon the experiences arranged for out of the total operation and management of a farm business in building farming programs.

In fact, it is being demonstrated that problems of pupil experiencing and responsibility can be arranged for with parents and cooperating farmers to include a much wider range of problems and a more practical, farm-size experience in each than has been possible with projects in the past or ever can be with the individual ownership project. Furthermore, parents react more favorably to the idea of the boy sharing or assuming responsibility for solving problems of total farm size than they do to the idea of the individual project. They recognize that the boy is learning through experience in a real farming situation rather than a miniature of the real thing. This appeals to the farmer who has always been convinced that one learns to farm by farming.

If you doubt this, try it out on parents, or a cooperating farmer, and get their reaction. For example, if the boy needs experience in the care and management of calves on a dairy farm, ask Dad which would provide the more effective learning, for the boy to cooperate with him in solving the problems of rearing the calves on the farm or for the boy to have a calf of his own to be reared separately. The same idea can be applied to any other enterprise on the farm. The cooperation of the parents is required

of course, but when obtained it has many advantages to the teacher.

One of the most effective means for combatting the uncertainty current in many places today regarding the future of vocational agriculture is to improve our concepts and practices of Individual Farming Programs. □

The Cover Picture

Star Farmer of Kentucky—Careful planning and replanning of his supervised farming program plus a lot of hard work resulted in Billy Joe Mitchell of Smiths Grove receiving the Kentucky Star Farmer award at the 1957 Convention of the Kentucky Association of Future Farmers of America. The cover page shows Billy Joe, his parents and teacher of agriculture, James Moss.

The Mitchell farming operation involves more than the usual father and son or sons situation. Included in the Mitchell partnership are Joe and Jess Mitchell, brothers, who own and farm 604 acres near Bowling Green, Kentucky. Billy Joe and Smith are sons of Joe Mitchell. When Smith, the older son, entered vocational agriculture and again when Billy Joe enrolled, their programs had to be planned carefully in order that they would be of sufficient scope, yet fit into the total farming operations. After Smith graduated from high school and entered the College of Agriculture at the University of Kentucky, Billy Joe's program was replanned and again this year when Billy Joe and Smith purchased a 158-acre farm adjoining the home farm. At the time Smith entered the University of Kentucky it was decided that while he was attending college Billy Joe would handle their farming operations. Following Smith's graduation, Billy Joe will enroll in the College of Agriculture and Smith will carry out their farming program.

The problem of labor has been an important one with the Mitchells since they are dairy farmers. For a number of years both Billy Joe and Smith have exhibited their cattle in many fairs and shows. Careful planning has resulted in keeping the farm operations going yet allowing the boys to exhibit their animals in local, district, state and regional shows.

Needless to say, planning has paid big dividends. □

It takes less time to do a thing right than it does to explain why you did it wrong. —H. W. LONGFELLOW



Vocational agriculture students at Jefferson, Iowa, assist a fellow student in planting kudzu in an experimental soil erosion control area. (Photo—Courtesy of Dirk Miller)



Members of a vocational agriculture class at Audubon, Iowa, are questioning a boy and his father concerning the materials used and cost of a new barn planned by the boy and his father as an improvement project.

Developing Farming Programs Of Vocational Agriculture Students

C. E. BUNDY, Teacher Education, Iowa State College.



C. E. Bundy

THE success of the entire high school program of vocational agriculture is dependent primarily upon the effectiveness of the instructor in basing his instructional program around the farming programs of his students. Our goal as teachers of vocational agriculture is to develop in our students those understandings and abilities necessary for them to become efficient established farmers. These objectives will never be reached if the instructional program is based upon a textbook organization of subject matter with little or no emphasis given to supervised farming programs.

While there are many ways in which we can improve ourselves as teachers of vocational agriculture, I believe that the greatest potential is associated with the improvement in our effectiveness to help students develop sound, well balanced, long-time farming programs.

There are five ways in which we can become more efficient in developing farming programs:

1. Improving our philosophies concerning the place of farming programs in vocational agriculture.

2. Planning the instructional programs or courses of study around farming programs.
3. Aiding the boys in surveying the home farm situations and in planning their farming programs.
4. Providing effective programs of farm visitation and farming program supervision.
5. Improving the supervision of farming program record keeping and analysis.

Philosophy Concerning the Place of Farming Programs in Vocational Agriculture

I have had the privilege of working with vocational agriculture instructors enrolled in summer school classes in three separate states during the past four years, and in all three states I found a tendency for some instructors to think of farming programs and productive projects as being synonymous. This situation may be due to a misinterpretation of the National Vocational Education Act which made provision for "directed or supervised practice in agriculture, either on a farm provided for by the school or other farm, for at least 6 months per year." During the early days of vocational agriculture one or possibly two productive projects per boy did constitute his farming program. This is not true today.

Farming programs today include productive projects, enterprise or farm

improvement projects and supplementary farm practices. These three types of activities carried out during a four to six year period should involve every enterprise and activity on the farm. The average student at best can carry only two or three productive projects per year. We would like for at least one of them to be a continuation project. A boy's farming program experience will be very limited if it is confined to productive project activities.

Enterprise and other improvement projects and the introduction of supplementary farm practices probably can result in the development of more skills by the boy and bring about more changes in the efficiency of the operation of the home farm than can be done by the carrying of production projects. A good farming program must involve all three types of activities. Have you analyzed the programs of your students? Are their programs broad? Do they involve the major activities which take place on the home farms?

Our long-time objective is to help our students become established in farming. We realize that only about 40% of our students will have an opportunity to farm. We have more boys than farms. We don't know, however, which boys will later be in the 40%. Our best bet is to help every farm boy who is interested make the best use of his home farm opportunities.

Course Planning

One of the most difficult problems in both pre-service and in-service training is to develop in the teacher the ability to organize the instructional program around the farming programs of the students. While in college our teachers completed a large

(Continued on page 79)

Developing Farming - - -

(Continued from page 78)

number of courses in technical agriculture. Most of them were organized around subject matter headings with little emphasis upon follow-up by the student. The courses terminated with the passing of examinations. It probably was difficult to see the possibility of organizing the courses in any other way.

We must organize the four-year instructional programs around the abilities, skills, and practices which are needed in meeting the problems on the home farm. The home farm is the laboratory. A problem may lead to a production project, an improvement project, or to a supplementary practice. These problems should be considered seasonally in an integrated program. The farm problems of the students serve as the bases for vocational agriculture.

Some teachers in their attempt to move away from formal courses organized around subject matter headings go to the other extreme and permit the boys to decide the problems to be discussed from day to day. We desire student participation and we want the instructional program planned around their problems. Much of the planning, however, must be done in advance. Today's problems must fit into the overall program.

Rather than to use subject matter headings in course organization, we prefer to develop enterprise units listing the abilities and sub-abilities to be developed and the practices which are to be introduced by the boy or to be used in analyzing his home farm enterprise.

Planning Farming Programs

I am convinced that the average teacher of vocational agriculture does not allocate sufficient time in his teaching program to adequately assist his students in making plans for their farming programs. The farming program is not an appendage to vocational agriculture. It is not a hurdle or an extra to be done outside of class. It is the core of the program. It should be the beginning, and each part of the instructional program should relate to it. Farming program planning is a class time activity which can involve weeks of interesting, motivating and instructional experiences. There is no doubt but that many vocational agriculture students do not reach their objective of becoming established in farming because their instructors did

not see fit to help them develop and carry out desirable plans of action.

We are encouraging our teachers to use the first weeks at the start of the school year, and additional time as needed throughout the year, in assisting boys in planning their programs. More time is needed by freshmen boys than by upperclassmen. Specific types of planning which must be done are as follows:

- a. Surveying and analyzing the home farm situation.
- b. Planning of budgets to determine the enterprises to be selected as productive projects or as enterprise improvement projects.
- c. Working out business agreements with father or other person.
- d. Establishing efficiency standards or goals appropriate to the individual farm situation.
- e. Planning production procedures of the activities and practices which will be involved in the management of the enterprises.
- f. Planning budgets and increased value or efficiency of improvement projects.
- g. Listing and making selection of supplementary practices to be introduced on home farm.

The approach which involves surveying the home farm enterprises is excellent. These surveys require considerable time but they give the boys an opportunity to determine the present status of the enterprises and encourage him to make plans of activities to be included in his farming program. All plans must have a starting point. The surveys give us our starting points.

Preliminary to the selection of the enterprises to be carried as productive projects, it is a good educational practice to encourage the boys to make budgets of probable income and expenses of several crops and livestock enterprises. These data, with information from projects completed the previous year and farm business record association data, are very helpful to boys in the selection of productive projects and in preparing the budgets for those selected.

There is a tendency for teachers to be careless in checking the business arrangement between the boy and his parent. We are placing greater emphasis upon the agreement and are encouraging the boys and their parents to include all necessary information in the agreement. It is especially important that prices be determined

for feed, labor and use of equipment. We recommend the use of extra sheets of paper in our record book and that the agreements be properly signed.

Our teachers have found it helpful in motivating students to get them to set up certain standards as goals relating to yields, rates of production, quality of production, costs of production or income per \$100 invested. We are better teachers if we have goals which we are striving to reach. Our students will have better farming programs if they set up some specific goals to shoot at.

The written plan of the production procedures and practices which will be involved in the management of the enterprise is most important. It may be made a part of the farming program planning book or a part of the student's vocational agriculture notebook. It is not usually written at one time, but in parts when the various problems are considered in the instructional program.

Adequate plans for supplementary practices and enterprise improvement programs must also be worked out. We have found it helpful to provide our students with a list of suggested farm improvements which would affect the real estate value of the farm or the livability of the home.

Farm Visitation and Supervision

Studies have been made which indicate a close correlation between the number and type of farm visits made and the effectiveness of the vocational agriculture program. It is assumed in many states that a minimum of six to eight visits per student must be made each year to maintain an effective program. To meet these standards it is necessary for a teacher of vocational agriculture to spend about 25 percent of his time during the regular school year and about 75 percent of his time during the summer months in farm visitation. Some of our most successful instructors are visiting their boys more than ten times each year.

While the number of visits is important, the time of the visit, and the methods used by the instructor greatly influences the effectiveness of the activity.

Most instructors find it helpful to visit the new student and his parent at least twice before the start of the school year. Some men find it helpful to invite the new students and their parents to attend project tours, or to hold a special meeting for them at

(Continued on page 80)

Developing Farming - - -

(Continued from page 79)

which time farming programs are discussed.

During the production season both crops and livestock enterprises must be observed each two to four weeks. Special problems often necessitate more frequent visits. It is important that we help our students analyze and solve their problems at critical times.

Most instructors have found it helpful to keep a record of each visit. Some keep a supervision notebook. The date and purpose of the visit is indicated as well as the condition of the various phases of the farming program and recommendations which were made.

If we are going to teach around the problems of the boys on the home farms, we have to get out to the farms regularly during the school year. We cannot wait until summer to make our farming program visits.

Farming Program Records and Analyses

The keeping of project records has been very painful to many vocational agriculture students. Many students have not seen the value of records. They have kept them to meet the minimum requirements but were happy to have their record books accepted by the vocational agriculture teacher. They did not wish to see them again. Many teachers of vocational agriculture find the record keeping phase of farming program supervision very distressing. They have been equally glad to get the records transferred to the state report and in the mail.

It is very important that we develop in our students a philosophy and understanding of the place of business records in developing their farming programs. It is also imperative that we help them develop those abilities necessary to adequately deal with this phase of vocational agriculture work. We cannot do this unless we have the right philosophy and attitude ourselves. A salesman can never sell a product on which he is not sold himself.

How many of you keep a careful and accurate record of your family living expenses? Your position as a teacher of vocational agriculture is your source of income just as farming is to your students. Sell yourself on the value of record keeping and you can sell the idea to your boys.

Most instructors who use the com-

No. of litters
Breed of pigs
Month farrowed
No. pigs farrowed per sow
Wt. per pig farrowed
No. pigs weaned per sow
Wt. per pig at 56 days
No. pigs raised per litter
Month marketed
Selling price per 100 lbs.
Age at marketing (days)
Avg. wt. at 154 days
Lbs. pork per litter at 154 days
Avg. daily gain
Lbs. feed per 100 lbs. pork
Cost of grain per 100 lbs. pork
Cost of protein per 100 lbs. pork
Total feed cost per 100 lbs. pork
Veterinary costs per 100 lbs. pork
Hours labor per 100 lbs. pork
Labor cost per 100 lbs. pork
Gross income per \$100 feed fed
Net income per \$100 feed fed
Net income per litter
Net return per \$100 invested
Labor income per sow & litter
Labor income per hour of work

pleted records of students in helping them make budgets and in setting up standards and goals have little difficulty getting them to keep good records. They see a need for them.

Periodic use of class time to give the boys an opportunity to bring records up to date is a must. A regular check-up by the instructor in the classroom and on the farm is also essential. In some states the record book remains at the school. The boys use mimeographed record sheets on the farm and the data is transferred to the books at a later date.

One reason for a lack of interest in record keeping by boys is that the instructor fails to use the summaries of records in his instructional program. Sometime during the next six months you will summarize the records of the 1956 productive projects. How much use will you make of them?

Many teachers have found it very helpful to prepare charts on which the analysis data of various productive enterprises has been tabulated. The charts or analysis sheets gives the boys an opportunity to evaluate the production and efficiency of their enterprises with those of their classmates. The real value of the records becomes evident when the boys seek to learn the causes for the differences in production, costs, and returns.

The example shown is one of several which our training teachers have developed with assistance from our farm management and technical subject matter specialists. The summaries which your students make of their

ANALYSES OF SOW & LITTER PROJECTS

Comparative analyses of sow and litter projects of students of Vocational Agriculture

productive projects could be adapted readily to this type of comparative analyses form.

I have presented briefly a five-step program directed at the improvement of the use of farming programs in vocational agriculture. We need to:

1. Improve our philosophies concerning the place of farming programs in vocational agriculture.
2. Organize our instructional program around the problems encountered on the farms of our students.
3. Aid the boys in surveying their home farms and in planning their long-time farming programs.
4. Provide more and more carefully planned farm visitation and farming program supervision.
5. Stimulate more careful record keeping and make better use of the record information. □

The Influence of - - -

(Continued from page 75)

Farming programs help keep the interest and attention of the young man focused on the home farm while he is meeting his military obligations in some far corner of the nation or world.

Farming programs make it possible to convince doubting parents that their son is old enough to assume certain responsibilities and to operate various farm machines.

Farming programs provide a means for teaching planning and the importance of planning for the future.

Farming programs provide an exploratory experience for some boys who need help in deciding for or against farming as a career.

It is the farming program concept which makes vocational agriculture what it is. To destroy or eliminate the farming program concept will destroy those characteristics of the vocational agriculture program which have caused so many persons to defend and support the program. □

Some ideas for . . .

Planning and Re-Planning Farming Programs

ROBERT J. STEINER, Vo-Ag Instructor,
Nathan-Hale-Ray School,
Moodus, Connecticut.



Robert J. Steiner

of the students in their relationship to the type of farming they will carry on when they finish high school.

Steps in Re-planning

A community survey of the farms and farmers was one of the first jobs undertaken in the re-planning program here. This also included the enlisting of farmers to help with the Vo-Ag program through the use of their facilities for demonstration purposes, judging contests and placement opportunities.

During the re-planning survey, the students themselves were visited and quizzed as to what their interests were and what goals they wished to strive for.

Record books were the third item that was dealt with. The standard *Connecticut Farming Program Record Book*, adopted by the Connecticut Vo-Ag Teachers Association in 1954 and printed by the Interstate Press, was put into use during the first year. A *Placement Record Book*, adopted by the instructors in the North Atlantic Region, was put into service in 1956 for boys who had placement as the major part of their farming program.

The final phase of re-planning of the farming programs took place in the classroom and dealt with the physical setup including training aids, textbooks, audio-visual aids, bulletins and magazines. Through the use of metal

army field file boxes obtained from the state educational surplus warehouse, all bulletins and magazines were filed in an easily accessible and efficient manner. This has proved itself over and over again, for the better farming program always needs a good source of information.

Contests Provide Incentive

Contests have provided one of the greatest incentives to learning and enjoyment to the boys here, and they have been involved rather strongly in the re-planning of the farming programs. The competitive spirit has always inspired the boys to further study. As soon as fair season gets under way, the boys are urged and helped to exhibit and show any of their productive enterprises. For those who are in placement, the co-operating farmer is urged to let a boy show his employer's stock. By the time school begins, the boys prepare exhibits for the state FFA Fair. The state horticulture judging contest, which includes a full day at the state university, is held in November. This is followed by the "Hoard's Dairyman" cow judging contest, the FFA Basketball tournament, the state spring livestock and poultry judging contests, and the CIP (Community Improvement Project) for farm safety. These contests have, in every case, helped a boy to do a better job in his own program, because a chance to "see what the other fella is doing!" usually starts wheels turning in the mind of the observer.

Parents Co-operate

The community survey was mentioned earlier, as was the visit to the students, to determine the needs and wants of the students in relationship to their farming programs. These early surveys and visits have helped get farmers to co-operate by allowing the



Students at the Nathan-Hale-Ray School, Moodus, Conn., are shown conducting a safety inspection as one of their activities in the farming program. Here they note a paint can in the Hereford grazing area.

boys to use their herds and flocks for judging, dehorning, and castrating. The parents have always been invited to observe projects and to attend agricultural functions. More can be accomplished with a student when a parent and teacher are both working together to help a student.

Students in this area are mainly from dairy and poultry farms, but the extent to which they can expand is limited in many cases because of economic conditions. There is also a lot of part-time farming carried on. Each boy and each program is really an individual situation and must be evaluated on its own merits. While the ultimate goal of most programs is to lead the boy into establishment in farming, the program may only serve to provide a boy with a part-time income while he works at another occupation. This latter practice is common in Connecticut where high paying industries employ many of our farm boys. Nevertheless, many a Vo-Ag student who became a part-time farmer has provided much food for the table of the American home.

Good Farming Programs Important

The instructional program in vocational agriculture, without an adequate farming program, is like a dog without a tail. Everything that is done in farming programs is done with the intent of improving that particular phase of the program. Oftentimes the instructional program needs a guinea pig, and it is the farming program which stands ready to be used. Here we use many of the students' projects to continually demonstrate improved methods. Pruning trees, starting flats, and docking sheep cannot be done in a book or on a desk in a classroom. Co-operative enterprises, such as a Maple Sugar House owned and operated by the FFA Chapter

(Continued on page 93)

It will help to have - - -

Planned Parent Education on Home Farming Programs

H. PALMER HOPKINS, Teacher Education, University of Maryland.



H. Palmer Hopkins

IN orienting students in vocational agriculture, most teachers have an elaborate and detailed plan as to how to teach the desired concepts for a satisfactory and growing home farming program. Before students enroll in class, the instructor usually has made several efforts to familiarize the students with what they may expect in vocational agriculture. After classes begin, detailed units of instruction are generally conducted in such areas as: getting acquainted with farming programs, purposes of farming programs, types of student farming activities, selecting student farming activities, making business arrangements, and others. Units are planned very carefully because teachers know the importance of each student understanding the philosophy back of the farming program idea. But even if a good teaching job is done with the students, we run up against another job that is just as important and more difficult to accomplish. Do parents understand what we have taught the sons? Unless they do, much of our good teaching will have been in vain. Necessity dictates that we must also teach the parents. How is it to be done?

Many Ways to Inform Parents

Parents may be informed concerning the farming program in many ways, but most of the job is usually done through four avenues: (1) home visits, (2) the student, (3) chapter publicity, (4) parent meetings. Many techniques may be employed in each avenue of approach. The important thing is not which methods are used, but whether it is a "planned program of information" that will reach every parent. Too often, the parent education program is a conglomerate operation aimed at the whole community, and the real target almost missed. Parental understanding of the home farming program philosophy is too vital to be left to any hit or miss

operation. Their indoctrination must be planned to coincide with the development of the student. As the student is taught, the parent also must be taught.

Home Visits Important

Traditionally this parent education has been done largely through home visits by the Vo-Ag teacher. There is no better way to inform parents about the home farming program. Most of the farming operations are performed at home and nothing can take the place of the home visit. However, Vo-Ag teachers seldom are scheduled sufficient time for adequate home calls during the school year. Busy Vo-Ag teachers have found that home visits must be streamlined for efficiency and supplemented by other techniques of informing the parents. A well-planned program for orienting parents in supervised farming will call for a minimum of one visit prior to, or immediately after, the boy's first Vo-Ag enrollment and another visit sometime near the end of the first semester. The first visit should be to get acquainted and to discuss the Vo-Ag program in broad general terms. The second visit should be to help in selecting and planning a farming program. More visits are desirable, but few Vo-Ag teachers can secure additional time. Between these visits, other techniques for educating parents should be employed.

Students Inform Parents

The most effective means for informing parents is through sons who have been properly taught. When each unit on home farming activities is completed at school, a summary of the unit should be sent home to the parents. Some of these summaries should be in the form of letters written by the teacher to parents. Students should be instructed how to present the ideas to parents. The student should understand that these statements are designed to aid him in selling his parents on the merits of a good home farming program. Written home communications should include such valuable lessons as Purposes of Home Farming Programs, Types of

Student Farming Programs, Minimum Standards for Home Farming Programs, Selecting Home Farming Programs, and Making Business Agreements.

Chapter Publicity Helpful

Chapter publicity is another important method of informing parents about home farming programs. However, this method must be considered supplemental education and cannot be relied upon to do the whole job. You can never be sure who has read your published articles, heard your radio programs or seen your exhibits. These avenues are excellent for informing the public in general, but cannot be considered adequate for parents. Parents must develop much deeper understandings than can be conveyed through mass communications media. Probably the greatest value of chapter publicity in educating parents is morale building.

Parent Meetings Valuable

Parent meetings may offer the greatest opportunity for parent education with a minimum of time expenditure. Such meetings afford parents an opportunity to learn from one another as well as ask questions of the instructor. A few older boys who have been particularly successful and who are good talkers can be particularly effective on the program. A two hour meeting for parents of new students might well be more valuable than forty hours spent by the Vo-Ag teacher in home calls. Why not give this time saving device a try by holding one parents' meeting next fall? It may work so well that in subsequent years you will hold two or three such meetings. Nearly all teachers who have held meetings for parents of beginning students are enthusiastic about them.

Well-Planned Program Needed

Many of you are undoubtedly employing other successful techniques for educating parents of beginning students about home farming programs. Suggestions contained herein are not intended to be a complete list, but rather a minimum program. The four avenues of approach advocated are: (1) carefully planned home visits at strategic times, (2) help the student convey ideas to parents by sending home letters and duplicated materials from his own classes, (3) utilize the usual avenues open to mass media communication, (4) hold meetings

(Continued on page 90)

Influence of High School Vocational Agriculture on the Rate of Establishment of Graduates in Farming

DUANE L. BLAKE, Teacher Education, Iowa State College.



Duane L. Blake

THIS study is part of a co-operative study designed by graduate students and staff members in agricultural education at Iowa State College to measure the influence of high school vocational agriculture on the establishment of graduates in farming. The researchers cooperatively designed the questionnaire, selected the sample, interviewed the graduates and processed the data.

The objective of this study was to determine the influence of high school vocational agriculture on rate of establishment of graduates in farming. A completely randomized design was used to stratify the sample of 320 graduates. One hundred and sixty of them were vocational agriculture graduates and 160 were nonvocational graduates. Schools located in north central and east central Iowa that had had vocational agriculture programs during eleven of the twelve years from 1943 to 1954 were paired with schools in the same areas that did not offer vocational agriculture during the same period of time. The pairings were based on size of school, soil type, county, level of living and other general characteristics.

Forty-five pairings were made in accordance with the above criteria. From these 45 pairs, 20 pairs of schools were selected by random sampling to make up the sample of 40 schools used in this study.

The male graduates from each school were classified into subgroups as follows: (1) Two graduates who completed high school during the 1943-1948 period of years and were sons of landowners; (2) Two graduates who completed high school during the 1949-1954 period of years and were sons of landowners; (3) Two graduates who completed high school during the 1943-1948 period of years and were sons of nonlandowners; (4) Two graduates who completed

high school during the 1949-1954 period of years and were sons of nonlandowners.

Each of the 320 farmers was personally interviewed.

The livestock and crop production information was normalized to a three-year period and the average prices of these products were used for the same three-year period.

Vocational agriculture graduates and nonvocational agriculture graduates seemed to originate from farms of similar size. In the vocational agriculture group, 53 of the graduates originated from farms ranging in size from 121 to 160 acres; whereas in the control group, 57 of the graduates originated from farms within this range. Equal numbers of 82 farmers in both groups were living on farms within the 161 to 320 acre range. However, from home farms with 321 acres or more, there were 25 vocational agriculture graduates as contrasted to 21 members of the control group.

Very little difference existed between the two groups of graduates in the numbers of crop acres on the home farm at time of graduation and in the number of brothers at time of graduation up to and including three brothers. Five of the vocational agriculture graduates had four or more brothers as compared to 14 of the nonvocational agriculture graduates.

There were more vocational agri-

culture graduates who were farming more land independently at the time of graduation than were members of the nonvocational agriculture group.

A larger number of nonvocational agriculture graduates had attended college and veterans on-farm training classes than had the vocational agriculture graduates.

More of the vocational agriculture graduates were working with or without wages plus a share of the profits from one or more livestock or crop enterprises as compared to the nonvocational graduates. Also, more of the vocational agriculture graduates had 10 or more years of farm experience since graduation than had the nonvocational agriculture graduates.

A total of 142 of the 160 vocational agriculture graduates were classified as operators as compared to 126 of the 160 nonvocational agriculture graduates. A non-operator was defined as the graduate who was working on a farm with or without wages.

The test of significance of variation by analysis of co-variance disclosed an F value of 10.57 which indicated that there was a highly significant difference in the rate of establishment of farming in favor of the vocational agriculture graduates.

In the analysis of co-variance it was also found that a significant difference existed between vocational agriculture schools because of variation in soil type, religion, nationality and other general characteristics. However, the test of significance also showed a non-significant F value of 1.38 for interaction which denotes that a successful job of pairing vocational agriculture and nonvocational agriculture schools had been accomplished.

As shown in Table 1, vocational ag-

(Continued on page 84)

Table 1. Mean crop and livestock gross products of graduates who were operators in 1955

Years farmed	Type of school					
	Vocational agriculture			Nonvocational agriculture		
	N	Crop	Livestock	N	Crop	Livestock
1	5	\$3760	\$1760	2	\$2600	\$1700
2	19	3832	2205	7	1100	1429
3	17	3771	2618	17	3882	1953
4	14	6264	2557	18	2883	2133
5	14	3757	2043	15	4866	1747
6	10	3750	2170	12	5583	2733
7	11	4091	3291	11	3891	1809
8	9	5511	4367	11	5882	2836
9	13	6854	3531	12	4508	2058
10	10	6510	5510	10	4660	3250
11	8	5138	2900	8	3450	3075
12	12	6175	3917	3	6667	2300
Mean		4951	3072		4164	2252

Influence of High - - -

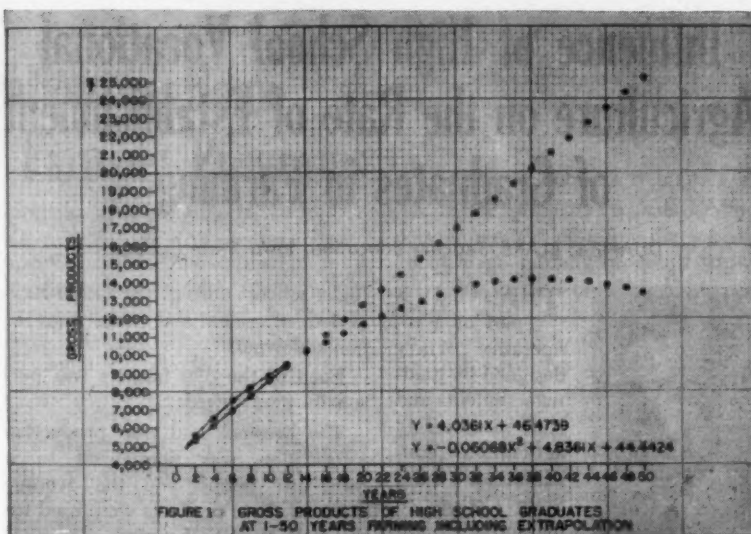
(Continued from page 83)

agriculture graduates had a mean crop gross product of \$4,407 during the first four years of farming as compared to \$2,616 mean crop gross product for the control group during the same period of farming. During the same first four years of farming, the mean livestock gross product of the vocational agriculture graduates was \$2,285 as compared to \$1,804 for the nonvocational agriculture graduates.

It was found that during the second four years of farming, the vocational agriculture graduates had a mean crop gross product of \$4,277 and a mean livestock gross product of \$2,968 whereas the control group had a mean crop gross product of \$5,055 and a mean livestock gross product of \$2,281.

This study disclosed that the vocational agriculture graduates had a mean crop gross product of \$6,169 and a mean livestock gross product of \$3,965 as compared to a mean crop gross product of \$4,821 and a mean livestock gross product of \$2,671 for the control group during the last four years of farming for the 12 years studied.

A mean total gross product of \$7,898 was found for the vocational



agriculture graduates as compared to a mean total gross product of \$6,391.25 for the control group. Therefore, the mean total gross product of the vocational agriculture graduates exceeded the mean total gross product of the nonvocational agriculture graduates by \$1,506.75.

As shown in Figure 1, this study indicated that the high school graduates who had had vocational agriculture training became established in farming at a faster rate than the high school graduates who had not had the

vocational agriculture training. It was determined that the vocational agriculture graduates received a \$532 increment on their total gross product each additional year they farmed as compared to a \$357 increment for the nonvocational agriculture graduates during the 12 year period studied.

The total gross product of the vocational agriculture graduates increased at the rate of \$175 per year more rapidly than the nonvocational agriculture graduates. □

Developing Farming - - -

(Continued from page 75)

trial worker. In 1955, the total expenditures for goods and services used in farm production averaged \$5,100 per farm and the total family living expenditures per farm family averaged \$3,300. These are averages, and for many farmers the corresponding figures are higher. As never before, farming requires operators who have a high level of competency in handling money and credit. The development of abilities along these lines should be provided through farming programs and augmented by related instruction.

In the current "cost-price squeeze," farmers are seeking ways to expand farming operations in order to spread the large investments in machinery and labor costs over a larger volume of business. Increased purchases of land by farmers, as well as other persons, is leading to continued increases in prices of land for farming. In addition to horizontal expansion, attention is being given to increased specialization, vertical diversification, and new methods of financing farm operations. These trends need to be considered in developing farming programs appropriate for various groups enrolled for instruction in vocational agriculture.

Young men are finding it increasingly difficult to become established in farming due to scarcity of opportunities to secure land and the increased capital requirements. A recent study in a midwestern state showed that the non-real estate capital of beginning farmers averaged over \$8,000 at the start. Of this amount, 60 per cent was owned and 40 per cent borrowed. Farming programs of high school students and of young farmers enrolled for instruction should contribute to establishment by providing opportunities for accumulating capital, using credit wisely, assuming various responsibilities encountered in becoming established in farming.

Increasing percentages of farmers and members of their families are engaging in off-farm work. In a recent year, 38.6 per cent of employed farm persons in the United States worked at non-farm jobs and 26 per cent of farm wives were similarly employed. Many adjustments in farming and improved management are needed to coordinate time schedules for farm work with off-farm jobs. This involves

careful planning of farming programs of high school boys on these farms, in cases where the boys are enrolled in vocational agriculture. Special planning of farming activities is also needed in conjunction with instruction for adult farmers who work part time off their farms.

The above are some suggested ways in which farming programs should be adjusted to keep pace with changing conditions in farming. These and other adaptations must be kept in the foreground if farming programs and other phases of vocational agriculture are to contribute most effectively to the abilities needed for making changes in farming.

Flexibility, ingenuity, and vision are required of all persons connected with vocational education in agriculture. It is important for teachers and others to re-evaluate the farming programs and replan these activities with the clientele of vocational agriculture. Advisory groups representative of the clientele should have an increasing part in the constant reappraisal and revision of these and other aspects of total programs in vocational agriculture. □

Many Factors Are Involved in Farming Program Development

E. A. HUTCHINSON, Vo-Ag Instructor,
Clintonville, Wisconsin.



E. A. Hutchinson

SELLING himself to the community is the primary task of a vocational agriculture teacher. Until this is done, he cannot expect to achieve the objectives of the Vo-Ag program. An instructor staying

only a year or two on one job cannot expect to get established.

After winning the confidence and respect of the farm families of the area, a Vo-Ag instructor may pursue the job that he was hired to perform.

First, he should make a survey of the farm needs of the area. This survey will furnish a guide for all future programs.

Parent and son cooperation is necessary. Interest for on the farm projects must be promoted both at the parents' level and at the level of the student himself. In my 33 years in this department, one of the most satisfying experiences has been instructing boys whose fathers were also my Vo-Ag students. This is one of the things that has contributed to parent and son cooperation. Parents' Night and award presentation in the presence of parents to boys who have done outstanding work have also helped.

The boy has a better chance of carrying on a good farming program if his parents understand it and share his pride of achievement.

A Vo-Ag instructor must constantly be aware of the change in times and farming methods. It is his job to pioneer improvements in farming methods with the boys who will become the farmers of tomorrow.

This area being largely a dairy center, I was instrumental in making the community realize the need for better sires. I immediately began using artificial insemination of the purebred heifers belonging to the Vo-Ag boys. Results were gratifying, and today the practice has spread until approximately 90 per cent of the breeding in this area is done artificially.

In getting a boy started with his farming program, it may be necessary for him to obtain financial assistance. I am careful in determining if the boy really needs assistance. But whether he borrows from his father or some other source, it has proved to be good training for the boy in learning to borrow and repay debts.

Care should be given to the size of the unit. A boy should not be encouraged to begin too large. He should start small and grow with the idea into larger farming programs.

In our program, we have instructional phases beginning with the boy as a freshman and carrying through his senior year.



A lesson in dehorning.

After the boy has set up his farming program, whether it is a purebred dairy heifer calf, purebred hogs, poultry, purebred grain, soil conservation or reforestation, I visit him at least twice to be sure he has all the information or help he needs.

In many cases, where he has trouble with poultry or pigs, he is visited many times so his loss will be as small as possible.

This kind of supervision is the key to a successful parent, son, and teacher relationship, and spreads throughout the community. Freshmen usually choose milk testing, crop and poultry farming programs. Sophomores continue previous programs and may add hogs or purebred dairy animal units. The juniors continue to expand previous units and add feeding assignments.

The senior continues his prior farming programs and adds farm management assignments such as dairy herd management, and undertakes such things as overhauling and making repairs of farm machinery.

(Continued on page 93)



Adjusting the farm sprayer.



Analyzing dairy herd records

Vo-Ag boys obtain valuable experience - - -

Using Banks to Finance Vocational Agriculture

WILBUR WEIR, Vo-Ag Instructor, Lodi, Ohio.

THE saying, "it takes money to make money," is as true for our students of Vocational Agriculture as it is for the full time farmer, the small businessman, or the rich tycoon.

In some cases, if our students are to have money to invest in Vocational Agriculture projects, they are going to have to find some source other than that of their parents to secure it. This is particularly so in our community where the majority of the students come from what I call part time family farms. When the student is in this situation his farming projects are in competition with that of his parents, or the parents may turn over the entire farm operation to him provided he can find some way to finance it. Consequently we must look elsewhere for available funds.

We are very fortunate to have a very complete banking system in our community of less than 2,000 people; a bank which has officers and directors that are highly aware of and appreciative of the importance of agriculture locally and on a national scale. This probably accounts, as much as any other single factor, for the students of vocational agriculture at Lodi never having been refused a loan to finance a project which I have recommended.

Financing of projects through the Lodi State Bank serves three objectives for me:

- (1) It enables many students to carry on projects which they would not have been able to finance themselves.
- (2) It serves as a valuable teaching tool in teaching farm financing. Another practice of "Learning by Doing."
- (3) It improves our public relations. When the local banker listens to

a student tell of his Vocational Agriculture project and the type of work we are doing, he is becoming better acquainted with our work.

When a student comes to me requesting a loan, I try to answer these questions:

- (1) Is the student a good risk? Will he properly manage a project if given the opportunity?
- (2) Will his parents approve and cooperate to see that the best job possible is done?
- (3) Is the project a sound one and does it have a high probability of making a profit if it is properly managed?
- (4) Will the project fit into the home situation?

If the answers to these questions are yes, the student must then make

a complete budget showing every item of expense and probable income. This done, the student and I visit the president of the Lodi State Bank and explain the proposed project and submit a copy of the budget to him. If he approves, his parents are then asked to come to the bank and co-sign the note with him.

By following the above procedure we have had a very close working relationship with the Lodi State Bank and its officers. This has given our students of Vocational Agriculture an opportunity to become better acquainted with the bank and its services, and it has also given the bank an opportunity to know its future customers and stockholders. I highly recommend the use of credit for Vocational Agriculture students to finance projects which are sound investments. □



Bank credit is often a means not only of securing high quality projects but of providing experience in the use of an indispensable farm tool.

The Place of Contests in the Vocational Agriculture Program

DAVID M. RICE, Vo-Ag Instructor, Genoa, N. Y.

ONE day in school one of my Agriculture students asked me, "What does this contest we are working on have to do with farming?"

I was quite surprised that this type of question had to be asked. I had taken it for granted that all of the students could see the connection. It was obvious to me how these contests correlated with our regular program. I wish to enumerate some of the advantages these contests have given to our chapter and tell how they have helped our over-all goal of training for farming.

Training for Leadership

First, the type of contest that trains the students in parliamentary procedure is one of the best ways we have for training good officers and good members. I feel that parliamentary procedure can be a very dry subject unless there is some real reason for learning. We have found that these parliamentary procedure contests are just the incentive which we needed. We now have yearly competition in which all of the members of our chapter are

(Continued on page 92)



The students pause to examine a dairy project.



This heifer has placed high in several shows. She is one of the several head of registered foundation owned by the student.

Some suggestions for - - -

Planning Farming Programs With Agr. I Boys

J. C. ATHERTON, Teacher Education, Arkansas.



J. C. Atherton

DIRECTED or supervised practice in farming is a mandatory provision of the Smith-Hughes Law and of later acts which supplemented it. However, the value of practical farm experiences

was recognized quite some time prior to 1917. And, in the forty years since the passage of the Act, no serious attempts have been made to delete the requirement for supervised practice. In fact, many states now encourage the development of year-round farming programs for the all-day boys, thereby going beyond the six months minimum prescribed by law. The farming program is then made the basis for the instructional program in vocational agriculture.

A variety of methods are being utilized to stimulate the all-day boys to build farming programs which will not only satisfy the requirements of the Vocational Education Acts, but will provide many worth-while learning experiences for the boys. No doubt, each system will produce some degree of success and there is probably no one *best* method to use in all cases. Recently, the author became familiar with the techniques of two teachers which seemed to have worked well and to have considerable merit. By combining the better fea-

tures of each teacher's activity, the procedures used would be similar to those described below. Developing the farming program with the student followed three phases. First, the student is given an understanding of the program and the reasons for conducting the practical work in addition to classroom and shop activities. Next, the student visits the farming programs of several all-day boys who have completed one or more years of vocational agriculture. Then, with the guidance of teacher and parents, the boy decides upon the farming activities he shall include in his high school course of agriculture.

Becoming Familiar with the Program

In the spring, shortly before the end of the school year, all boys in the last year of junior high school who are interested in vocational agriculture are invited to a special FFA meeting. After the regular opening ceremonies of the chapter, the program is presented. It is designed to acquaint the boys with vocational agriculture, its purposes and activities. One FFA member discusses the purposes of supervised farming activities using colored slides taken in the community to illustrate his talk. Another member describes the highlights of his program. A third boy explains the relationship between his farming activities, class studies, shop work, and the FFA. This is followed by a recreational period in which refreshments are served. At this time, plans are

made for a project tour to look over several farming programs.

Visualizing the Farming Program

One evening after school hours, the vocational agriculture students, with prospective members as their guests, go by school bus to the homes of three or four all-day boys and tour the projects of these individuals. The scope of the farming program, how it is managed and financed, and other related information is given each boy. Each student visited has a sheet of paper prepared for the visitors listing his total farming program with the scope of each activity. The schedule for the tour has been arranged so that the boys will arrive at a campsite as darkness sets in. Here, several class members will have a fire going with hot coffee and chocolate ready to drink. Hamburgers or wieners will be ready for cooking. Following the meal, there is a period of recreation.

Building the Program

During the summer months, while school is not in session, each prospective student is visited. The program of vocational agriculture is discussed with the boy and his parents. Early in the new school year, the purposes of the farming program are reviewed and the boy is encouraged to plan his farming activities for the next four years, with the understanding that the plans will be reviewed and possibly modified at the end of each year. As an aid in program planning, a mimeograph containing the following information is given each student:

The following list of productive, improvement, and supplementary projects should be helpful to you in selecting your agriculture program.

(Continued on page 88)

Planning - - -

(Continued from page 87)

Please take this list home and plan with your parents what projects you should take to help you, your family and home most.

Remember 300 hours of labor is necessary on all your projects. You should have at least 2 or 3 productive projects and as many improvement projects and supplementary jobs as you think you can complete.

Do not take a project to please your teacher. You should take something you can profit by in knowledge and in earnings.

A productive project is a project carried out for profit or to increase your business.

Productive Projects

1. Cotton
2. Corn
3. Potatoes
4. Sweet Potatoes
5. Soybeans
6. Peanuts
7. Pop Corn
8. Cucumbers
9. Peppers
10. Melons
11. Tomatoes
12. Other Vegetables
13. Lespedeza for Seed
14. Hay
15. Peas
16. Sorghum
17. Oats
18. Other Small Grains
19. Alfalfa
20. Peaches
21. Apples
22. Grapes
23. Bee Keeping
24. Registered Dairy Calf
25. Registered Beef Calf
26. Registered Pig
27. Colt
28. Beef
29. Dairying
30. Pork
31. Sheep
32. Poultry for Eggs
33. Poultry for Broilers
34. Turkeys
35. Ducks
36. Geese

37. Game Chickens
38. Rabbits
39. Pecans
40. Spinach

An improvement project is carried out to increase the value of the home in cash, beauty, and liveability.

A supplementary job is carried out to develop certain abilities of the boy that he would not get by carrying out the productive or improvement projects.

The following is a list of improvement projects and supplementary jobs built around the most common enterprises. Look the list over and select the ones you could profit from the most.

Improvement Projects**I. Home**

1. Landscaping
2. Painting
3. Papering
4. Screening
5. Insulating
6. Sodding the lawn
7. Level yard
8. Under-pin house
9. New addition
10. Picket fence
11. Other yard fence
12. Clothes Closets
13. Shelves in pantry
14. Put in hot water
15. Put in running water
16. Build kitchen cabinets
17. Put down hardwood floors
18. Pave driveway
19. Cobble stone walks
20. Concrete walks
21. Build new out buildings
22. Put in kitchen sink
23. Put in lighting system
24. Improve roads to house
25. Build sanitary toilet
26. Add windows
27. Have a farm clean-up day
28. Get telephone service
29. Get bath fixtures
30. Curb well
31. Build shed over well
32. Get gas system at home
33. Build storm cellar

Supplementary Jobs**I. Home**

1. Walk through gates
2. Build door steps

3. Prune shrubs
4. Keep lawn mowed
5. Make flower beds
6. Make a rose garden
7. Make flower boxes
8. Replace broken glass
9. Sand floors
10. Kemptone room
11. Keep farm records
12. Make gates
13. Repair broken furniture
14. Repaint furniture
15. Make a map of home
16. Build lawn furniture
17. Fertilize lawn
18. Fertilize shrubs
19. Make rose trellis
20. Spray to control insects
21. Make farm sign
22. Make mail box
23. Make tool box
24. Make work bench
25. Remove all eye-sore buildings
26. Put up clothes line
27. Drain yard
28. Build medicine cabinet
29. Build shoe rack
30. Build clothes hamper
31. Build paper basket
32. Build kitchen stools

Improvement Projects**II. Barn**

1. New buildings
2. New addition
3. Paint
4. Rat proof crib
5. Build trench silo
6. Build up-right silo
7. Build calf creep
8. Build pig creep
9. Build stanchions
10. Install lights
11. Put in hay unloader
12. Build milk house for grade "B" milk

Supplementary Jobs**II. Barn**

1. Build troughs
2. Build mangers
3. Build gates
4. Drain lot
5. Proper care of manure
6. Build loading chute
7. Build temporary shades
8. Set out trees for shade
9. Build manure pit
10. Clean up all injury hazards
11. Build harness racks
12. Paint all tools
13. Paint all implements

(Continued on page 89)



A start in the dairy business by these brothers was made through the purchase of three registered heifers.



The group examine the method of pruning followed by an all-day boy in his vineyard.

Planning - - -

(Continued from page 88)

Improvement Projects**III. Fields**

1. New fences
2. Change fences
3. Clean out fence rows
4. Terrace land
5. Contour tillage
6. Strip crop land
7. Fill in ditches
8. Clear land
9. Rotate crops on land
10. Plant winter cover crops
11. Plant summer cover crops
12. Plant legumes to turn under
13. Treat fence post
14. Paint post

Supplementary Jobs**III. Fields**

1. Fence repair
2. Make Post
3. Cut bushes
4. Make soil test
5. Make map of farm
6. Work out rotation
7. Seed for wild life
8. Leave cover for wild life
9. Sod terrace outlets
10. Protect from fire

Improvement Projects**IV. Pastures**

1. Sod
2. Seed with bermuda
3. Seed with proper mixture
4. Dig water pond
5. Clean out spring
6. Dig spring or well
7. Put in sanitary water supply
8. Lime
9. Phosphate
10. Manure
11. New fence
12. Winter pasture
13. Harrow level
14. Have year around pasture
15. Rotate pasture

Supplementary Jobs**IV. Pastures**

1. Clip weeds
2. Cut bushes
3. Stock pond with fish
4. Fertilize pasture
5. Maintain terraces
6. Lay out contours
7. Lay out terraces
8. Fence to rotate
9. Test soil
10. Make gates
11. Make seed pan
12. Provide shade
13. Clean land
14. Scatter manure with harrow

Improvement Projects**V. Swine**

1. Build new house
2. Get registered stock
3. Breed to registered sire
4. Make & use self feeder
5. Make & use self waterer
6. Feed high protein supplement
7. Put in guard rails
8. Concrete feed floor
9. Feed mineral mixture
10. Make water pond

Supplementary Jobs**V. Swine**

1. Ring pigs nose
2. Castrate
3. Vaccinate
4. Notch ears of pigs

5. Provide shade
6. Provide wallow
7. Build butchering equipment
8. Remove needle teeth from pigs
9. Disinfect navel cord
10. Treat for lice
11. Treat for worms
12. Treat for milk fever

Improvement Projects**VI. Cattle**

1. Feed balanced ration
2. Produce grade "A" or "B" milk
3. Breed to registered sire
4. Breed by artificial insemination
5. Have cows tested for T.B.
6. Have cows tested for Bang's
7. Feed good mineral mixture
8. Breed at proper age
9. Home mix feed
10. Make milk cooler
11. Pasteurize milk
12. Have D.H.I.A. test on cows

Supplementary Jobs**VI. Cattle**

1. Treat for grubs
2. Ring bull
3. Teach calves to lead
4. Teach calves to drink
5. Prepare calf for fairs
6. Check for Mastitis
7. Vaccinate for Black Leg
8. Spray with D.D.T.
9. Make rope halter
10. Make leather halter
11. Dehorn with chemical
12. Dehorn with saw
13. Dehorn with clippers
14. Disinfect utensils
15. Tattoo
16. Castrate with knife
17. Castrate with clamps
18. Use horn trainers
19. Mix feed
20. Splice a rope
21. Throw a cow
22. Get animal registered
23. Keep breeding & calving dates
24. Tan a hide
25. Use uterine capsule

Improvement Projects**VII. Crops**

1. Use recommended varieties
2. Use recommended fertilizer
3. Plant certified seed
4. Defoliate cotton
5. Lime soil
6. Join Coop. Marketing
7. Plant hybrid seed
8. Plant legume cover crops
9. Plant legumes in rotation
10. Side dress crops
11. Set up road side market
12. Have crops classified
13. Use proper storage

Supplementary Jobs**VII. Crops**

1. Keep bushes cut
2. Test seed before planting
3. Treat seed
4. Inoculate seed
5. Fumigate for weevils
6. Store seed properly
7. Spread manure
8. Control insects
9. Sharpen plows
10. Advertise products

Improvement Projects**VIII. Home Orchard**

1. Establish peach orchard
2. Establish apple orchard
3. Establish grape vineyard
4. Follow spray schedule
5. Prune properly
6. Set out on contour

7. Organize spray ring
8. Build hot beds and cold frames
9. Set up road side market

Supplementary Jobs**VIII. Home Orchard**

1. Treat for borers
2. Cultivate
3. Use proper storage
4. Fertilize

Improvement Projects**IX. Forestry**

1. Set out seedlings
2. Plant seed
3. Leave seed trees
4. Thin properly
5. Protect from fire

Supplementary Jobs**IX. Forestry**

1. Make fire lanes
2. Cultivate
3. Harvest seed
4. Estimate timber stand
5. Identify trees
6. Grow seedlings in nursery

Improvement Projects**X. Miscellaneous****Supplementary Jobs****X. Miscellaneous**

1. Shoe a horse
2. Treat harness

Using the suggested list of enterprises, improvement projects, and supplementary practices, the student prepares a proposed farming program which is discussed with his parents and with the teacher of agriculture. Once the farming program is agreed upon, an agreement is prepared and signed by pupil, parents, and the teacher.

This approach to the problem seems to have several advantages:

1. The pupil becomes familiar with the program in vocational agriculture early.
2. He has an opportunity to see good farming programs as well as hear them discussed.
3. He sees what other boys in the community have done and are doing.
4. Parents become familiar with the purposes and values of the farming program and their cooperation is solicited.
5. The comprehensive list of enterprises, improvement projects, and supplementary practices suggest to the student numerous activities he may engage in.
6. An understanding between parents, pupil, and teacher is conducive to good relationships. □

The greatest glory of a freeborn people is to transmit that freedom to their children.

—WILLIAM HARVARD

A "success" story shows that - -

There Is Satisfaction in Teaching

LAURENCE KELSON, Vo-Ag Instructor, Moroni, Utah



Laurence Kelson

young farmers and adults to keep abreast with an ever changing agriculture.

This is not the same little agricultural community that I became acquainted with nearly two decades ago. Elden Westenskow and I have shared success and failure these many years in our two-man department, and we feel that some of these changes have come about as a result of our efforts.

Moroni is located in the mountains at a high elevation in Central Utah. The growing season is short and only a limited acreage of shallow soil is available. Irrigation water is in short supply—all of which adds up to trouble for the modern farmer.

Some thirty years ago, turkey growing was introduced into Moroni. This new enterprise seemed to fit the needs of this community and people were quick to recognize new opportunities. Adult classes in turkey production have been offered by our vocational agriculture department for the past eighteen years. More recently, young farmer instruction has centered about this growing enterprise, and the all-day program has given major emphasis to turkey production, processing and marketing. From a humble beginning many years ago, turkey production in Moroni has become an agricultural business known throughout the state. Many people on relief

rolls in 1933-1935 have worked themselves into a profitable, self-sustaining business.

The community of Moroni has demonstrated well the adage, "cooperation pays." Through cooperative effort, these people built a feed plant capable of producing up to 175 tons of mash per day. They have one of the most modern and well equipped processing plants found anywhere in the western region. It is capable of processing oven-ready turkeys at the rate of seven thousand toms, or nine thousand hens or lighter breeds, per day. In 1956, 850,000 turkeys were produced in Moroni which represents approximately 12,000,000 pounds. Twenty-four Future Farmers had a total of 20,000 turkeys as a part of their supervised farming program last year. Fourteen young farmers in vocational agriculture classes had a total of 48,000 birds last season.

The producers, wives, sons and daughters, and many others in the area are able to find work in the production of turkeys. This production has constantly been on the uptrend and has doubled every five years. The processing plant provides employment for boys and girls, men and women on a part time basis, at least, from July to January.

The Future Farmers are certainly living up to their FFA slogan, "Earning While Learning." They are learning better production methods, better feeding standards, and better ways of producing turkeys.

The turkey industry is extremely competitive and hazardous which requires that the vocational agriculture teachers be constantly on the job. It is not difficult for a boy or a young man to lose enough turkeys in one twenty-four hour period through smothering, storm or disease, to com-

pletely wipe out any margin of profit that they may have had in their flock of turkeys.

Everyone cooperates with the growing of this all-important crop, and the Future Farmers get a good lesson in credit and other procedures of doing business. To produce each turkey, it costs in feed, brooding, poults, etc., approximately \$5.00 per bird. It is not difficult to realize the tremendous expenses involved with an FFA boy or young farmer having 200 to 3,500 turkeys. This represents nearly \$1,000 to \$20,000 in capital outlay. The Future Farmer must learn in this kind of a program that his word must be as good as his bond. He must exercise very careful sanitation and feeding practices if he is to pay back his creditor and show a profit.

Yes, it is satisfying, indeed, to look back over the years and evaluate the progress made. It is extremely gratifying to see our Future Farmers of yesteryears in key positions of leadership in this turkey operation. Vocational agriculture has made a real contribution to this community of 1,100 people. □



An inside view of the Moroni Turkey Processing Plant. Oven-ready turkeys are packaged at the rate of 600-700 per hour.

Planned Parent - - -

(Continued from page 82)

for parents of beginning Vo-Ag students. Failure to use any of these avenues is likely to result in sub-standard home farming programs, or inefficient use of teacher time. Neither of these eventualities can be tolerated, since the home farming program is the heart of Vo-Ag, and teacher time is our most scarce commodity. Time, efficiency and improved parental co-operation demand well-planned programs of parent education on home farming programs. □



Figure 1

The author examining a chart prepared for use with the opaque projector. This chart is one of a series used with a lesson unit dealing with microorganism activity in the rumen of beef cattle. These charts are filed with the lesson plans for beef cattle feeding.

(Photo by W. A. Snyder)

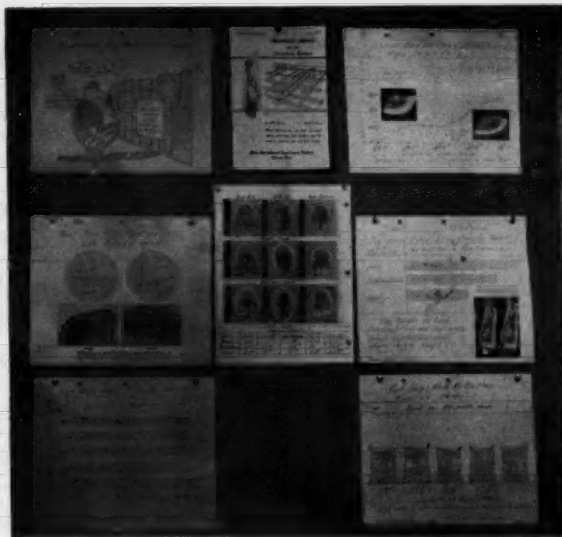


Figure 2

Materials prepared for presentation with the opaque projector are drawn or mounted on stiff paper so they may be handled and filed easily. The cartoon was drawn by the author's wife. The large picture is from the Successful Farming magazine while the small pictures used with graphs are from The Iowa Farm Science. (Photo by W. A. Snyder)

Advice from a teacher - - -

Prepare Your Own Teaching Aids

HARLAN E. RIDENOUR, Vo-Ag Instructor, Millbury, Ohio.



Harlan E. Ridenour

THE teacher of vocational agriculture has many teaching aids available for his use. Some of the more common ones are the commercially prepared motion pictures and film strips. Many commercial companies also have excellent charts and samples which are available for our use.

Use Aids Properly

The author has found that the use of teaching aids has helped his students to obtain a better understanding of their problems. If a teaching aid is to benefit the students it must apply directly to the point being illustrated. It is oftentimes difficult to find a "prepared" teaching aid that will effectively illustrate the desired point. At times like this, the author has found that the most effective teaching aids are those which he has prepared himself to fit the local class-

room teaching situation.

Visual materials should not be used as a crutch by a teacher to help him when he has nothing better prepared. Improper and indiscriminate use of teaching aids can cause more confusion on the part of the student than the use of verbal means of teaching. The teaching aids to be used in teaching a lesson should be carefully selected and prepared at the time the lesson is planned. Each teaching aid used should have a vital connection with the point it is used to clarify. Mere exposure to teaching aids and nothing more is not teaching.

Figure 1 shows how the author has materials for the opaque projector and flannel graph filed with his lesson plans. Other teaching aids which cannot be filed flat, such as specimens or models, are indicated by notes in the lesson plan. The experience of the author has been that the proper use of teaching aids requires more careful lesson planning than does verbal means of teaching. When applicable commercial teaching aids are not available, it then becomes necessary for the teacher to prepare his own.

Aids Give Life to Teaching

Much of the information we use in teaching is contained in dull technical bulletins written by research men for other men with technical training. While this information is of vital interest to farmers and farm boys, they are not likely to obtain it from these sources. Technical information can be given "life" by the use of well prepared charts, graphs, and cartoons which are constructed by the teacher to bring out the points he wants to emphasize in his community. Figure 2 shows how the author has used a cartoon, magazine pictures, and charts and graphs to illustrate points brought out in the Ohio Agricultural Experiment Station Research Bulletin number 728, "Market Hogs Can Be Accurately Graded." These materials are prepared for use with the opaque projector and are a part of a series used to illustrate a lesson plan dealing with the importance of producing meat type hogs. A heavy grade of 8½" by 11" paper is used for the materials to be presented with the opaque projector. Charts, graphs and cartoons are drawn directly on the paper, while magazine pictures and other similar materials are pasted to the heavy materials so they may be handled to a better advantage. These teaching aids, used for a few minutes' time, will often produce more learning about meat type hogs than will the use of printed descriptions cover-

(Continued on page 92)

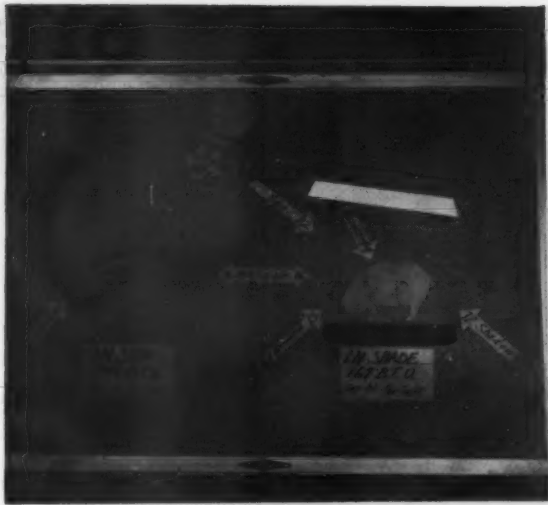


Figure 3

The illustration shows how many British Thermal Units of heat a hog receives when he is standing in the direct sun compared with the B.T.U.'s he receives while standing in shade. The flannel board was constructed by stretching flannel over plywood. The objects on the board are cut out from different colored construction paper backed with pieces of suede paper to cause them to stick to the flannel. (Photo by W. A. Snyder)

Prepare Your - - -

(Continued from page 91)

ing several pages or a talk requiring several minutes. The author has had the experience of students becoming interested in a subject presented by the use of various teaching aids and voluntarily turning to the text for further information on the subject.

Other Valuable Aids

The author has recently constructed a flannel board which is illustrated in figure 3. The picture shows how the author presented information contained in University of Missouri Research Bulletin No. 423, "Environmental Physiology and Shelter Engineering," dealing with sources of heat in summer and the effect the use of shades have on the temperature of hogs. The flannel graph enables the teacher to present the facts one at a time as the lesson unfolds. The ma-

The Place of - - -

(Continued from page 86)

able to participate. This practice does a fine job in training our officers and makes them top material for acting as leaders of our chapter.

Development of Farming Programs

The contests that are held in connection with our crops act in the same way. By putting a competitive spirit into this activity, the boys are stimulated to learn the very best way of growing the particular crop we are demonstrating. We are always trying to get ahead of our neighboring chap-

terials used on the flannel graph can easily be filed with the appropriate lesson plans.

The opaque projector has been one of the most valuable teaching aids used by the author. It can be used to present information of many types. Figure 4 illustrates how a series of cartoons, drawn by the author's wife, are used to illustrate how high quality eggs may be produced. A series of charts such as this serves much the same purpose as a film strip would but is much cheaper and can be made to suit the needs of the lesson being taught. This series of charts is filed with the lesson plan dealing with quality egg production.

Samples and models collected or prepared by the author give his students an opportunity to touch and see the things being discussed in the classroom. An example of this is a collec-

tions as well as others in the state. This same type of stimulation carries over into the farming programs of the boys. They want their yields to be as high or better than those on our school farm contest plots and those of other members of the chapter.

The judging contests that we hold on a local, county, and state level serve as the stimulus necessary to train the boys on how to select the kind of livestock we want them to own. The boys who have the best record in our judging contests invariably have the best livestock at home.

One of the contests that does the



Figure 4

A series of charts can be presented with the opaque projector in much the same manner in which a film strip is used. These charts illustrate how quality eggs can be produced.

(Photo by W. A. Snyder)

tion of feed samples obtained from a local feed mixing company. When the feeding of vitamin B₁₂ to hogs is being considered, a sample can be passed around so everyone can see it.

Another example of a teacher prepared teaching aid is a motor which has been mounted in the shop. This motor can be used by the students in their preliminary studies of tractor maintenance.

While there are many fine commercial teaching aids available which should be used to the fullest advantage, it has been the experience of the author that the most effective teaching aids have been those charts, graphs, pictures, or models that have been made or collected by the teacher to meet a need in his own classroom. Don't expect others to be able to fully anticipate teaching aids you will need. □

most good is the "Record Keeping Contest" in connection with our dairy cows. It is very difficult to get boys to keep accurate records due to the work involved unless they have something like the competition in this contest. I feel that keeping and using records is one of the most important functions of our Agriculture Departments. Anything that we can do to help stimulate interest in this area is of utmost importance.

Contests Aid Enrollment

Perhaps the method given above is

(Continued on page 94)

Professional and Teaching Aids

Safety Practices in Farm Mechanics.

Manual, by R. W. Canada. Available through—Colorado A & M College Book Store, Fort Collins, Colorado. 65 cents per copy including mailing. 1956, 40 pages.

A manual covering step by step procedures in teaching safety practices in farm mechanics shop along with tests on safety procedures on various tools and equipment. Develops procedures for training safety squads, fire fighting squads and the Safety Engineer and his duties. Suggestions on first aid are included. A bibliography of references and instructional aids are also included.

Approved Practices for the Farm Tractor. B. K. Bristol, Department of Agricultural Education, The Pennsylvania State University, University Park, Pa. 1956. 25 cents each. 17 pages.

Land Use and Management Program. N. K. Hoover, Department of Agricultural Education, The Pennsylvania State University, University Park, Pa. 1955. One copy free to each supervisory and teacher training office. 8 pages.

A Program for Young Farmer Instruction in Vocational Agriculture in the State of Maine. H. S. Brunner, Department of Agricultural Education, The Pennsylvania State University, University Park, Pa. 1954. One copy free to each supervisory and teacher training office. 4 pages.

This mimeograph was developed in a workshop for teachers of vocational agriculture at the University of Maine. Objectives and evaluation criteria were developed.

Many Factors - - -

(Continued from page 85)

Vo-Ag students are encouraged to carry on a variety of enterprises so they will be versed in as many phases of farming as possible instead of a calf project all four years and nothing else.

Among the different types of programs being undertaken by the Clintonville Senior High School Vo-Ag department are: dairy herd testing, weed control, owning 33 purebred gilts, reforestation and windbreaks, 5,000-8,000 pine trees planted annually, poultry, conservation of land including terracing, corn improvement for high yields, introduction of new varieties of grain, and learning the wide variety of skills that a farm boy needs to know to be a successful farmer tomorrow. □

The following items are available from the Department Agricultural Education, University of Missouri, Columbia, Missouri:

Source Unit #12 Corn—10 pages. 8½" x 11". Single copies, 10¢.

Source Unit #13 Management and Use of Farm Woodlands—7 pages. —7 pages. 8½" x 11". Single copies, 10¢.

Teaching Adult Farmers—12 pages. 6" x 9". Single copies, 10¢.

Handbook for Students of Vocational Agriculture. 23 pages. 6" x 9". Single copies, 25¢.

Concrete Loading Ramp—Plan A and Masonry Loading Ramp—Plan B. B. K. Bristol, Department of Agricultural Education, The Pennsylvania State University, University Park, Pa. 1956. One copy free to each supervisory and teacher training office. 1 page each.

Tractor Maintenance Project in Vocational Agriculture. F. Anthony, Department of Agricultural Education, The Pennsylvania State University, University Park, Pa. 1955. One copy free to each supervisory and teacher training office. 5 pages.

Ways to Finance the Farm Business. Henry S. Brunner and N. K. Hoover, Department of Agricultural Education, The Pennsylvania State University, University Park, Pa. 1957.

This material was prepared for teachers of agriculture and farm credit administration representatives who plan to meet jointly with young farmer groups and in-school vocational agriculture students. It is prepared as a suggested plan of procedure for discussing the topic, "Ways to Finance the Farm Business." One copy free can be obtained from Farm Credit Administration, Baltimore 3, Maryland.

Planning and - - -

(Continued from page 81)

here, are also part of the program. Another example of co-operative activities is our Vo-Ag Forest Fire Crew which has kept many an acre of land from being blackened. Every activity of farming and farm living, together with the related and co-operative activities off the farm which have educational value, should be the backbone of a good farming program augmented by an on-the-farm and in-the-classroom instructional program. In this changing economy we must continually plan and re-plan farming programs, for no vocational agriculture department can stay stagnant and expect to yield fresh ideas. □

Factors Associated with Establishment in Related Agricultural Occupations and Their Relationship to the High School Curriculum in Vocational Agriculture. A summary of a dissertation by N. K. Hoover, Department of Agricultural Education, The Pennsylvania State University, University Park, Pa. 1957. One copy free to each supervisory and teacher training office. 8 pages.

A Guide for Organizing, Teaching, Supervising, and Evaluating Young and Adult Farmer Programs. Philip S. Barton, Teacher Trainer, et al., Department of Agricultural Education, University of New Hampshire, Durham, New Hampshire. Limited number of copies available. July, 1956, 61 mimeographed pages.

A guide for the use of teachers of Vocational Agriculture and special teachers in organizing, teaching, supervising, and evaluating young and adult farmer programs. The material presented recognizes the individual's farming program as the foundation of the course of study and provides for instruction on a "learning by doing" basis.

A Guide for Teachers of Vocational Agriculture to Assist Them in Improving Their Public Relations. Philip S. Barton, Teacher Trainer, et al., Department of Agricultural Education, University of New Hampshire, Durham, New Hampshire. Limited number of copies available. July, 1956, 11 mimeographed pages.

The material presented is divided into two sections. The first is titled "What, Why, and Who." This section briefly summarizes what public relations is, why it is important in our program, and to whom it should be directed. The second section titled "How" points out some of the ways and means of carrying on public relations.

Teachers of Vocational Agriculture in Pennsylvania, Their Training Tenure, and Other Characteristics. Experiment Station Progress Report No. 138. W. F. Hall, Department of Agricultural Education, The Pennsylvania State University, University Park, Pa. 1955. One copy free to each supervisory and teacher training office. 6 pages.

Vocations Pursued by Alumni of The Pennsylvania State University in Curriculum in Agricultural Education, 1914-15 to 1945-46. Experiment Station Progress Report No. 7. W. F. Hall, Department of Agricultural Education, The Pennsylvania State University, University Park, Pa. 1949. One copy free to each supervisory and teacher training office. 9 pages.

News and Views of the Profession

Taylor on Editing-Managing Board



Harold B. Taylor

Harold B. Taylor has recently been elected to represent the Central Region on the Editing - Managing Board of the *Magazine*. A Hoosier by birth, Taylor was brought up on a central Indiana farm in the heart of the corn belt.

He was graduated from the Waveland High School. In 1933, he was graduated from Purdue University with a major in Agricultural Education. After two years as teacher of vocational agriculture in Covington, Indiana, Taylor returned to Purdue to work for the M.S. degree in Agricultural Economics. He then went to Michigan State University to do research work in Agricultural Economics.

Taylor returned to Indiana in 1938 to serve as Assistant State Supervisor and Teacher Trainer in Agricultural Education. He held this position until 1946, when he became State Supervisor of Agricultural Education and State Leader of 4-H Clubs.

A family of three boys, aged 17, 14, and 13, has given Taylor an appreciation of the problems faced by the youth of today. He has also maintained an active interest in farming in his home community, giving him an opportunity to know the attitudes and feelings of farm people. He has an especially strong interest in and concern for the rural population. □

The Place of - - -

(Continued from page 92)

not the best teaching technique, but this method has worked for me. We have more than doubled the enrollment in vocational agriculture in our school in the last three years. If I were to select one area that has contributed a great deal to our growth, I would point out the interest and growth of our members through contests. As a result of these contests we have developed bigger and better farming programs, and every agriculture teacher knows that bigger and better farming programs lead to a bigger and better department. Competition is a wonderful thing. My feeling toward competition in the vocational agriculture program is "when not overdone, the more, the better." □

Ruch, Chairman of Editing-Managing Board



Jack Ruch

Jack Ruch, Teacher Trainer, College of Education, University of Wyoming, will assume the duties of Chairman of the Editing - Managing Board of the *magazine* for the second time in the past five years.

Upon the completion of the unexpired term of R. W. Canada, June 30, 1954, he was re-elected as Special Representative for the Pacific Region. He will again assume the duties of Chairman of the Board in August.

Mr. Ruch has been Teacher Trainer in Agricultural Education in Wyoming since 1946. He was reared on a Wyoming cattle ranch and was graduated from the University of Wyoming in 1929. He served as teacher of Vocational Agriculture for twelve years in Wyoming before becoming State Supervisor, a position he held from 1941 to 1946. He served as president of the Wyoming Agricultural Teachers' Association in 1938, and is a member of Alpha Zeta, Phi Delta Kappa and Alpha Tau Alpha fraternities. □

Richardson on Magazine Staff



Stanley Richardson

Stanley S. Richardson is continuing to serve the profession as one of the special editors for the Pacific Region. He is a native of Utah and received his B.S. at Utah State Agricultural College in 1925. After receiving his M.S.

in Agricultural Education from the University of Idaho in 1938, he served as a teacher of vocational agriculture for twelve years. From 1937 to 1950 he was State Supervisor of Agricultural Education in Idaho. In 1950, he was appointed Professor and Head of Agricultural Education, Utah State Agricultural College. He served as a member of the National FFA Advisory Council for two years and National Secretary of Alpha Tau Alpha for four years. □

**Have you renewed
your subscription
to The Agr. Ed. Mag.?**

New Executive Secretary Named for FFA



Wm. Paul Gray

Wm. Paul Gray of Colorado has been appointed national executive secretary of the Future Farmers of America, according to an announcement issued by the U. S. Office of Education in Washington, D. C.

Mr. Gray has been assistant professor of agricultural education at Colorado State University, Fort Collins, since 1953. Previously, he had served as executive secretary of the Colorado State FFA Association.

He succeeds Dr. A. W. Tenney who has been national executive secretary of the FFA since 1941. Dr. Tenney has been carrying a dual assignment in the Office of Education for the past seven years. He will continue his work as program specialist in agricultural education for the Central Region, and as a member of the national FFA Board of Directors.

Mr. Gray was born August 26, 1911, on a farm near Marston, Missouri. The family moved to Colorado in 1918. He was graduated from Colorado State University in 1936 with a major in animal husbandry and minor in agricultural education. He also has a Master's degree from Colorado State, and has done work there and at Michigan State University toward his doctorate.

The new FFA executive secretary taught vocational agriculture in the high school at Hillsdale, Wyoming, during the 1936-37 school term, then at Saguache, Colorado, from 1937 to 1941, and at Eaton, Colorado, in 1941-42. During the war he worked two years as flight instructor for young airplane pilots, and two years as instructor in marine engineering for the U. S. Army Transportation Corps.

In 1946 he returned to Eaton and resumed his vocational agriculture teaching duties. While there, his FFA Chapter was one of the outstanding chapters of the nation, winning Silver Emblem once, and Gold Emblem twice, in the National Chapter Contest. He taught at Eaton until 1952, then moved to Denver where he worked nearly two years as assistant state supervisor of agricultural education and executive secretary of the state FFA. He has been teaching at Colorado State University since the fall of 1953.

Mr. Gray and his wife, the former Miss Edna May Glover of Center, Colorado, were married in 1941. They will make their home in the Washington, D. C., area. □

BOOK REVIEWS

PLANTS OF THE BIBLE by A. W. Anderson, pp. 72, illustrated in color, published by Philosophical Library, Inc., 15 East 40th Street, New York 16, N. Y. Price \$6.00.

This book will appeal to both plant and Bible lovers. Following a descriptive historical introduction are twenty-four sections devoted to different plants referred to in the Bible. Each section includes a page devoted to Biblical references to a plant, followed by one or two pages of historical and descriptive discussion. Twelve sections are illustrated with full-page colored paintings.

Mr. Anderson, who has a lifetime's botanical experience, is Associate of Honour, Royal Institute of Horticulture, New Zealand.

—G.B.J.

THE MIDWEST FARM HANDBOOK (Fourth Edition) by the Staff of Iowa State College, pp. 422, illustrated, published by The Iowa State College Press, Ames, Iowa. Price \$3.00 (Earlier editions appeared in 1949, 1951, and 1954.

In the preparation of the fourth edition, the staff members of Iowa State College have emphasized time and money-saving methods for farmers as well as presenting up-to-date and improved farming practices. Each of the 20 sections to the book emphasizes how farmers may get the most out of their crops, livestock, and equipment. The book includes more than 100 tested rations for feeding livestock—hogs, cattle, horses, and poultry. Many practical solutions are included to problems in erosion control, crop rotation, fertilizing, and seeding.

Among the features of the engineering section are plans for a farm workshop, water and sewage disposal systems, and terracing, as well as more than 50 pages on the construction and maintenance of farm buildings and machinery.

For livestock and poultry there are handy tables to aid farmers in identifying and treating common diseases. Ten pages in color are included in the sections that list more than 400 pest and weed control measures.

The sections on dairying include many ideas on feeding, milking, artificial insemination, and better ways of keeping production records. The sections on poultry include helpful advice on feeding, housing, breeding, and disease prevention. Fruit and vegetable varieties and spray schedules are included.

Whether a farmer works 40 acres or 400, the book will have many ideas, suggestions, and facts which will prove helpful.

YOUR OPPORTUNITIES IN VOCATIONAL AGRICULTURE by Lloyd J. Phipps, pp. 175, illustrated, published by The Interstate Printers and Publishers, Inc., Danville, Illinois. Price \$2.95.

This book was designed specifically for use by boys enrolled in vocational agriculture or those who are interested in enrolling. It explains in simple, understandable language to the boys what vocational agriculture is, what it is for, how it is organized, how it operates, and how the boys fit into the total program of vocational agriculture. It is an excellent book to help orient boys to vocational agriculture, supervised farming programs, and the FFA. It contains nine well-organized Chapters: What Is Vocational Agriculture, How to Study and Learn in Vocational Agriculture, What Is Your Future in Agriculture, How to Get Along with Others, What Safety Precautions Should Be Observed in Vocational Agriculture, What Is the FFA, How To Be a Good FFA Member, What Are Farming Programs, and What Is a Good Farming Program.

The book should prove to be of inestimable value to teachers of vocational agriculture who are interested in doing a superior job in guidance and in helping boys to benefit most from their study of vocational agriculture.

Dr. Phipps is Associate Professor of Agricultural Education, University of Illinois.

—G.B.J.

PLANT PATHOLOGY (Second Edition) by John Charles Walker, pp. 707, illustrated, published by McGraw-Hill Book Company, Inc., New York, Price \$10.00.

This book is one of the widely known and used "McGraw-Hill Publications in the Agricultural Sciences."

The principles of plant pathology are discussed in seven chapters covering such subjects as: definitions and terms, classification of diseases, history of plant pathology, environmental relations, host-parasite interactions, disease resistance, and various types of remedial measures.

It describes in detail the symptoms, causal factors, disease cycle, and control of nearly 100 representative diseases of plants. Included are all major types of diseases occurring among the chief agricultural crops and forest trees.

The book is excellently illustrated with almost 200 pictures and drawings. It is an excellent reference for Vocational Agriculture libraries.

Dr. Walker is professor of Plant Pathology, University of Wisconsin.

—G.B.J.

This book is a recommended addition to farm and Vocational Agricultural libraries, especially in the midwest.

—G.B.J.

LOUIS BROMFIELD AND HIS BOOKS by Morrison Brown, pp. 166, illustrated, published by Essential Books, Inc., Fair Lawn, N. J. Price \$4.50.

Those who have enjoyed *Malabar Farm*, *Pleasant Valley*, and many other literary works of Louis Bromfield will enjoy Brown's evaluation of Louis Bromfield's work. Perhaps there have been few authors who have lived so closely to the soil and written so vividly and inspiringly in this area.

Brown's evaluation attempts to trace the influence of Bromfield's background and his environment on his writing, to explain the paradox of his success in such divergent fields, to relate the practical farmer to the creator of numerous works of imagination. In telling the story of Bromfield the author tells also of his books, how each came to be written, the birth of the plot, the people who became characters, the experiences which were translated into themes, and the travels which opened up new horizons.

—G.B.J.

THE MARKETING OF LIVESTOCK AND MEAT by Stewart H. Fowler, pp. 622, illustrated, published by The Interstate Printers and Publishers, Inc., Danville, Illinois.

The book is arranged so as to take the reader step-by-step through a logical unfolding of the entire field of marketing of livestock and meats. The first three chapters introduce the field of marketing, areas of production and consumption of meat, and relates the importance of the meat packing industry to our economy. Information on determining the value of livestock and meats is presented in Chapter 4 as a basis for making the remaining chapters most beneficial. The next 13 chapters deal with when, where, and how to market livestock. Livestock prices, regulation and supervision of livestock marketing and the packing industry, and livestock market news are discussed in Chapters 18, 19, and 20. Chapters 21 and 22 tell the story of the end-products—meat and by-products. Finally, a chapter is included on the selling of purebreds.

The book is excellently illustrated with numerous pictures, figures, and tables. Selected references are listed at the end of each chapter.

The book is well organized. Materials are clearly and concisely presented involving all major facets of livestock marketing, yet it is written in a simple and understandable manner. This book is recommended for Vocational Agriculture and livestock farm libraries.

Dr. Fowler is Associate Professor of Animal Husbandry, State College of Washington. He has had experience as a packer buyer, and as an instructor of livestock marketing courses in two Land Grant Colleges.

—G.B.J.



How are you going to weigh the milk when the cows all go swimming? Water buffalo dairy herd swim in the Camote Sea, while frustrated Warner Smith, scales in hand, looks on. Warner was formerly agricultural teacher at East Bakersfield High School in California. He is now livestock specialist with the Stanford Team which is working at the Baybay National Agricultural School, Leyte, Philippines. His answer, "If you can't milk them, join them."

Stories In Pictures



W. Jack Weaver, retired supervisor of Agricultural Education in New York State, at right, presents cup and scroll from Farmers of Tomorrow Club in Givat, Ada, Israel, to Howard Cornell, President of the New York Association of FFA at Annual Convention at Verona, New York, on May 18th.

The cup and scroll are a gift to New York FFA from the first chapter of Farmers of Tomorrow in Israel established as a result of his efforts there. The New York Association recognized the Givat Ada Chapter by making the unit an honorary chapter at their annual convention held at Perry, New York, in May 1956 (Photo by H. L. Noakes)

Demonstrations in the mechanization of lowland rice paddy preparation for Agricultural Education students at the Central Luzon Agricultural College, Philippines:



Using Japanese rotary hoe pulled by a native carabao.



A self-propelled "Gem" rotorvator being operated by one of the "farmerettes."



Fordson Major D tractor equipped with the Philippine-designed Arawheel and power-take-off operated rotorvator.



Another view of the demonstration. Note the student farmer cottages in the background.

